

SEA TIGER

RDC-300080
NIKKO
RADIO CONTROL

MANUAL OF INSTRUCTIONS

- Read this manual carefully to the end before playing.
- Keep this manual for future reference.

Features of SUB-168

- *2-channel, 9 functions: submerge, surface, left/right turn, spin turn, stop, etc.
- *By adjusting the angle of the left/right screws, SUB-168 can make a quick dive or quick surface.
- *The 2-motor system can make the left/right screws turn in opposite directions and thereby enable the submarine to spin turn.
- *By adjusting the left/right screws at different angles, SUB-168 can make a tornado dive or rolling dive.
- *If you stop operating, or if the radio waves fail to reach the submarine, the safety system will automatically bring the vessel to the surface.
{When the submarine is submersed underwater, the radio waves can be transmitted to a distance of about 5m. Keep the submarine within a range of 5m. from the transmitter.}
- *The hull is water-tight and can submerge to a depth of about 60cm.
- *The transmitter is water-resistant, so there is no need to worry if it gets wet.

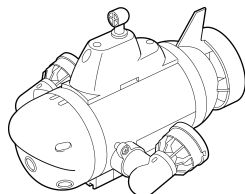
Battery Requirements

[Transmitter]: 6F22(9V) dry cell battery x 1

[Submarine]: Size-AA alkaline batteries x 3

(Use ONLY AA-size alkaline batteries)

Contents of the Kit



Submarine x 1



Transmitter x 1



Antenna tube x 1



Diving weight x 16

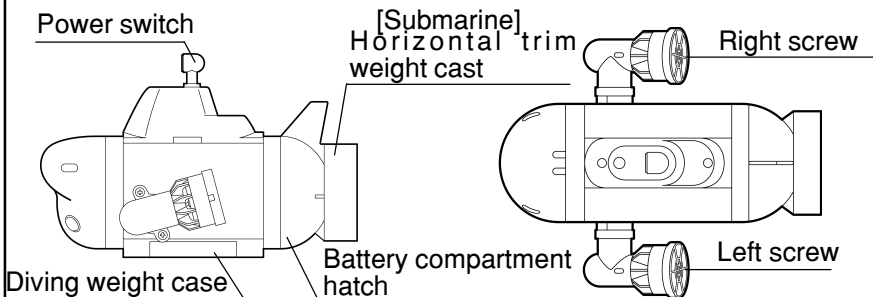
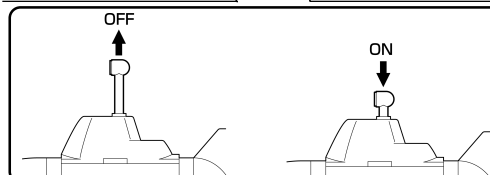


Manual of
Instructions X 1

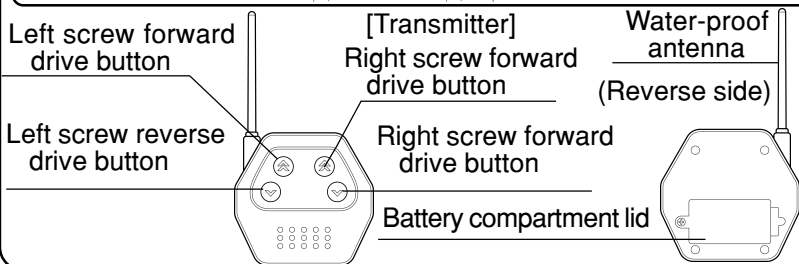


Horizontal trim weight x 7

Names of the Parts



The periscope is the power switch. Push down/ pull up to turn ON/OFF.



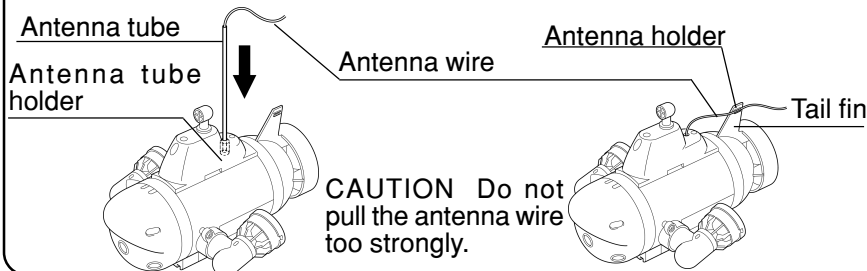
How to attach the antenna tube

[When playing in a large pool]

Pass the antenna wire through the antenna tube. If the antenna tube does not fit well into the antenna tube holder, hold the root of the antenna wire with one hand, and pull the wire gently with the other hand. This will make it easier for the antenna tube to fit into the holder.

[When playing in the bathtub or other small places]

When playing in a relatively small tank of water like the bathtub, or example, fit the antenna wire into the holder on the tail fin.

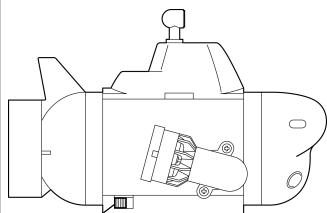


Battery Installation

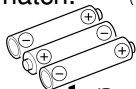
● How to Install Batteries

[Submarine]

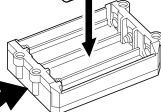
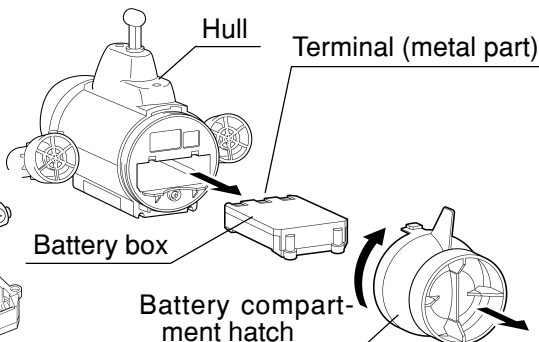
- * Avoid mixed use of old and new batteries, or mixed use of different types of batteries.
- * Make sure that the power switch of the submarine is turned OFF when exchanging batteries.



Slide the stopper forward and remove the hatch.



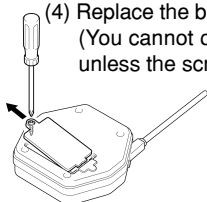
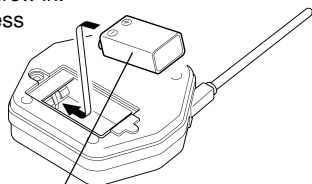
Terminal side



- (1) Make sure that the power switch is turned OFF.
- (2) As shown in the diagram, slide the stopper forward and remove the battery compartment hatch by turning in the clockwise direction (looking at the submarine from the rear).
- (3) Remove the battery box from the hull.
Install 3 size-AA alkaline batteries. Make sure that The + and - poles are positioned properly.
- (4) Put the battery box back into the hull from the terminal side first, with the terminal (metal part) on top.
(Be careful so that the battery box is replaced in the right direction. The box is designed so that it will not fit in the wrong direction. Don't jam the box in by force.)
- (5) Replace the battery compartment hatch. Turn the hatch in the counterclockwise direction.
* Fit the hatch in firmly and screw in tightly so that water will not seep into the battery compartment.

[Transmitter]

- (1) Use a + screwdriver to remove the screw attaching the battery lid.
- (2) Slide the lid to the side and remove.
- (3) Install the battery, making sure that the + and - poles are positioned properly.
- (4) Replace the battery compartment lid and screw in.
(You cannot obtain complete water-tightness unless the screws are firmly attached.)



(The screwdriver is not included in the kit.)

6F22(9V) dry cell battery

Adjustment of the Trim and Weight

After exchanging batteries, check the trim and weight again.

- * Make sure that the specified batteries are installed properly, and that the battery compartment hatch is screwed in and locked firmly before putting the submarine into the water.

<Adjustment of the waterline> * The buoyancy of the submarine differs depending on the nature of the water. Adjustments should be made in the water where you will actually be playing. Also, adjust in shallow water where the submarine is within easy reach.

(1) Put the submarine into the water.

Adjust the weight so that the waterline (water surface) is within the width of the check line both fore and aft, as shown in the diagram. (If the submarine is too heavy, there is the danger that it will sink. If it is too light, it may not be able to dive underwater as controlled.) Always keep an eye on the position of the check line and water surface while you are playing. If the submarine starts to go out of balance, stop operating and readjust the weight.

(2) Adjustment of the horizontal trim weight

To make the rear (aft) of the submarine sink more deeply, turn the horizontal weight stopper in the counterclockwise direction and pull off. Increase the number of horizontal weights in the desired position as needed. (As you increase the weight in the aft, the entire hull will sink deeper into the water.)

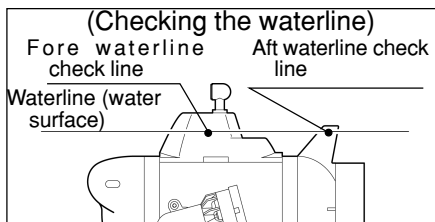
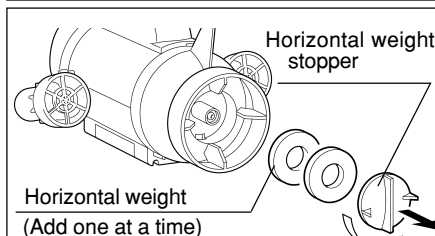
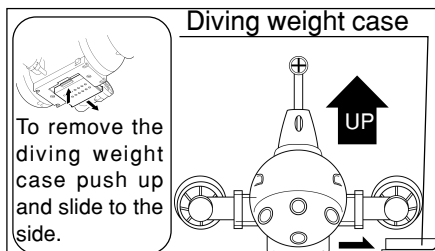
(3) Adjustment of the diving weight

If the submarine is too light and floats too high above surface, the submarine has to be made heavier. Slide out the diving weight case on the underside of the hull to the side, and increase the number of diving weights in the appropriate position in the case.

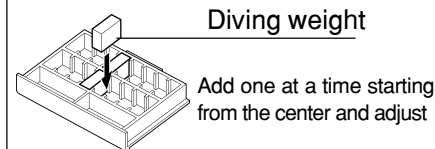
[Danger!]

* Unless the trim (balance) is adjusted properly, the submarine cannot be controlled as desired.

* If any other types of batteries besides those specified are used, there is the danger that the submarine will become too heavy and sink.



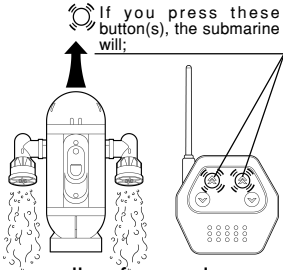
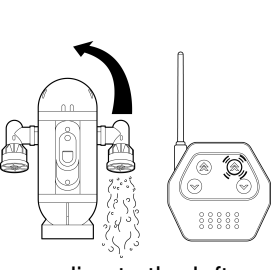
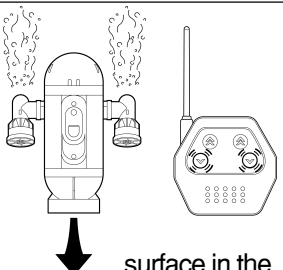
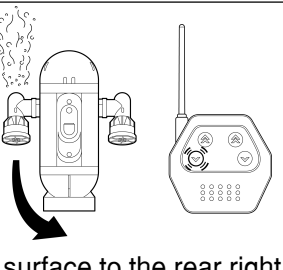
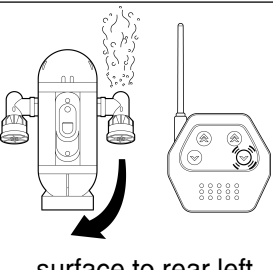
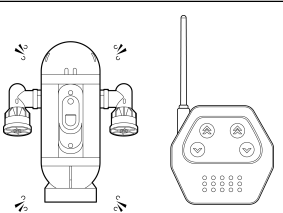
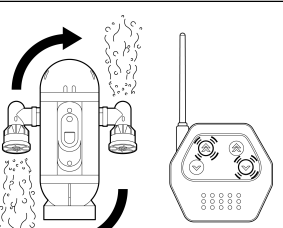
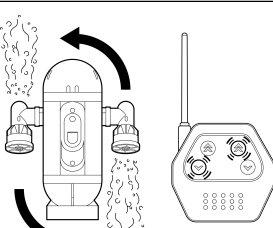
When attaching or detaching the diving weight case, keep the submarine upright with the periscope pointing upward. If you turn the submarine upside-down, the weight may fall out of the case. (If the diving weight case cannot be detached smoothly, push it back in once and try again from the beginning.)



Operation Procedures

How to Play

- Turn the power switch of the submarine ON.
- Let the submarine float on the water. (Be sure to adjust the trim.)
- Transmitter operations and submarine movements
(When the submarine is submersed underwater, the radio waves can be transmitted to a distance of about 5m. The submarine can withstand submersion to a depth of about 60cm. If you let the submarine dive too deep, the radio waves will not reach it, and it will go out of control. Be careful of the distance and depth when operating.)
- After you finish playing, turn the power switch of the submarine OFF and take it out of the water.

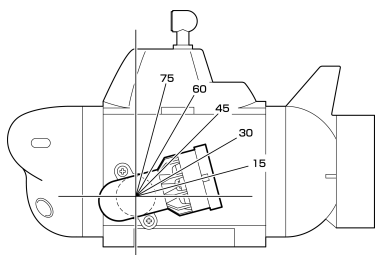
 <p>If you press these button(s), the submarine will;</p> <p>dive forward.</p>	 <p>dive to the right.</p>	 <p>dive to the left.</p>
 <p>surface in the rear direction.</p>	 <p>surface to the rear right.</p>	 <p>surface to rear left.</p>
 <p>stop. (The submarine's buoyancy will make it surface gradually).</p>	 <p>spin turn to the right.</p>	 <p>spin turn to the left.</p>

Adjustment of the Angle of the Left/Right Screws (Manual)

*As can be seen in the diagram, the angle of both screws can be adjusted by hand between 15° and 75°. By adjusting both screws at a steep angle of about 75°, the submarine can be made to quick dive or quick surface.

*If you adjust the screws at small angles, the submarine will not dive or surface so fast, but the forward/reverse running power will be increased.

*By adjusting the left and right screws at different angles (one small and the other at a sharp angle), the submarine will move in a unique manner. Change the angles any way you like and enjoy all sorts of movements.



Control Distance and Water Quality

*Depending on the quality of the water, it may be very hard for the radio waves to reach the submarine. Submerge the submarine underwater within your reach, and test the control distance before playing. Muddy or impure water is dense and full of foreign particles, and is not suitable for playing. Choose water which is clear and enables you to see the submarine underwater.

Points to be Careful of When Playing

(As the battery power runs low, the control distance will become shorter. Shorten the distance between the submarine and transmitter as your playing time becomes longer.)

- Before playing, make sure that the submarine moves according to your transmitter operations.
- While the submarine is still on land, check the maximum controllable distance between the submarine and transmitter. When submerged underwater, leave an allowance and keep the submarine slightly closer to the transmitter than the maximum controllable distance.
- If the metal tab in the battery box is deformed and not touching the battery, lift up the tab and adjust properly.
- DO NOT play in water that is dirty, has weeds, or obstacles. The filth or weeds may get caught in the screws or other parts and prevent the submarine from moving.
- DO NOT play where there is water current, or when the wind is blowing strongly. The submarine may be swept away.
- DO NOT play in the ocean (salt water) because the parts will rust.
- DO NOT play outdoors in thunderstorms.
- If the submarine does not move properly, exchange all the batteries in both the submarine and the transmitter.
- After playing, remove all the batteries from the transmitter and submarine. Drain out all the water from the submarine and dry completely before storing away.

Is the Submarine Really Broken? Check and See.

What's wrong?	Possible causes	Check and see
The submarine doesn't move	<ol style="list-style-type: none"> 1.The submarine's power switch is turned OFF. 2.The submarine is too far away from the transmitter. 3.The + and - poles of the batteries of the transmitter or submarine are positioned in the wrong direction. 4.The metal tab in the battery box is flattened and not touching the battery. 5.The metal tab in the battery compartment of the transmitter or submarine is rusted. 6.The batteries of either the transmitter or the submarine have run out of power. 	<ol style="list-style-type: none"> 1.Turn the power switch ON. 2.Bring the submarine closer to the transmitter. 3.Install all batteries in the right direction. 4.Lift up the metal tab so that it touches the tip of the battery. 5.Use sandpaper to remove the rust. 6.Replace with new batteries.
The submarine does not move properly	<ol style="list-style-type: none"> 1.There is radio interference. 2.There is another radio control vehicle nearby using the same frequency band. 3.The batteries of either the transmitter or submarine are running out of power. 	<ol style="list-style-type: none"> 1.Play in a different place or at a different time. 2.Play in a different place or at a different time. 3.Replace with new batteries.

- **This radio control submarine moves by use of radio waves.** In places where there are other equipment using radio waves, the submarine may go out of control or move by itself. In such cases, there is nothing wrong with the submarine itself. Choose a different time or place to operate the submarine.
- **If the inside of the hull should accidentally get wet, turn the power switch OFF immediately.** Remove the battery box. Wait until the hull and battery box are completely dry. Reinstall and turn the power switch ON to play.
- **The transmitter is water-resistant.** However, if it should accidentally be submersed in water, or if the internal parts should get wet, remove the batteries immediately and wait until the internal parts are completely dry. Reinstall the batteries and resume operation.

CAUTION!

To the guardian: read carefully to the end.

- ©Be sure to read the Manual of Instructions, especially the "Caution" and "Warning" points, before starting to play. Observe the instructions when playing.
- *The kit contains very small parts (such as the diving weights). They can be dangerous if swallowed by mistake, so keep them away from reach of children under 3 years old.
- *Do not operate the submarine in the ocean, rivers, lakes, etc. where the depth of the water is unknown, or in places where there is the danger of being drowned.
- *The maximum depth to which the submarine can be submerged is 60cm. Do not operate the submarine in deeper waters.
- *Operate the submarine in clean fresh water. Do not operate the submarine in salt water, dirty water with lots of impurities, or chemical water (soap water), etc.
- *DO NOT let the inside of the submarine, especially the metal tabs of the battery box, get wet. DO NOT touch the metal parts with your hand or with metal objects because it may cause a short-circuit and can be very dangerous.
- *Use ONLY size-AA alkaline batteries for the submarine. DO NOT use Ni-Cd or other rechargeable batteries or manganese batteries.
- *Be careful not to let your fingers, hair or clothes get caught in the screws. (DO NOT turn the power switch ON while the submarine is still in your hands.)
<If the alkaline batteries are used improperly, they may become heated, explode, ignite, leak, etc. Observe the following points and the warnings in the manual of instructions.>
- *Make sure that the + and - poles of the batteries are positioned properly.
- *Avoid mixed use of old and new batteries, or mixed use of different types of batteries.
- *When you finish playing, be sure to turn the power switch OFF and remove all the batteries.
- *DO NOT let the batteries get wet and cause short-circuits. DO NOT take the batteries apart, heat them, or throw them into a fire.
- *The Manual of Instructions will be necessary if you forget the operation methods or the caution points, so DO NOT throw it away. Keep it with you.

- *This product is comprised of precise electronic parts. DO NOT treat it roughly, drop it, let the internal parts get wet, or take it apart.
- *When you are not playing, take the submarine out of the water, wipe off all the water with a dry towel, etc., and remove all the batteries before storing away.
- *In salt water or water with high density (such as mud water), the submarine will gain buoyancy and will not submerge as desired. Play in clean fresh water.

Care and Maintenance

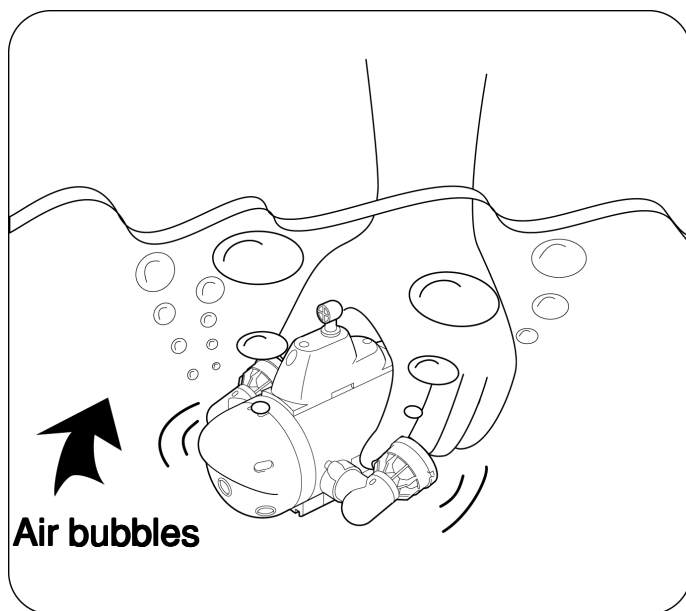
- * If the submarine gets dirty, wipe off the filth and stains with a slightly dampened towel, and then wipe off the moisture with a dry towel. To clean the minute parts, use something like a used toothbrush.

WARNING!

BE SURE TO READ WELL!

- *DO NOT use chemicals. The submarine may melt and cause accidents.
- *DO NOT keep the product in extremely hot or cold temperatures, or where the humidity is extremely high (e.g. inside automobiles or under direct sunlight, etc.) because it can cause accidents.
- *When storing away, BE SURE to remove all the batteries from the transmitter and the submarine.

1. Please read instructions book carefully before operating this submarine.
2. Adult supervision is recommended. Keep out of reach of very young children.
3. Children should be made aware of the dangers associated with playing near water.
4. Ensure both Submarine and Transmitter Unit are turned off before attempting to pick up Submarine.
5. Please keep these instructions for future reference.
6. Never attempt any repair as may invalidate your guarantee.



When the submarine is submersed underwater, there may be some air left inside. Hold the submarine underwater and shake it until all the air bubbles have been removed.

If you try to operate the submarine without removing all the air inside, you may not be able to control the submarine as desired.

DO NOT let the submarine dive deeper than 60cm. If you let it dive any deeper, the water pressure may cause the water to seep into the submarine.



THE RBRC™ Seal on the nickel cadmium battery pack

indicates that NikkoAmerica is voluntarily participating in an industry program to collect and recycle these batteries at the end of their useful life. The RBRC program provides a convenient alternative to disposing nickel-cadmium batteries into the trash or municipal waste stream, which is illegal in some areas.

Nikko America's payments to RBRC makes it easy for you to drop off the spent battery pack at local retailers who sell replacement nickel-cadmium batteries.

You may also contact your local recycling center for information on where to return the spent battery pack.

RBRC is a trademark of the Rechargeable Battery Recycling Corporation.

THE FCC WANTS YOU KNOW

This device complies with part 15 of the FCC Rules, Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Your R/C boat might cause TV or radio interference even when it is operating properly.

To determine whether your R/C boat is causing the interference, turn off your R/C boat.

If the interference goes away, your R/C boat is causing the interference.

Try to eliminate the interference by:

- Moving your R/C boat away from the receiver.
- Contacting your local store for help.

If you cannot eliminate the interference, the FCC requires that you stop using your R/C boat.

CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE MANUFACTURER FOR COMPLIANCE COULD VOID THE USERS AUTHORITY TO OPERATE THE EQUIPMENT.

SAFETY PRECAUTIONS

1. Please read instructions book carefully before operating this Boat.
2. Adult supervision is recommended. Keep out of reach of very young children.
3. Children should be made aware of the dangers associated with playing near water.
4. The propellers of this Boat rotate at very high speeds.

KEEP FINGERS CLEAR OF PROPELLERS AT ALL TIMES

5. Ensure both Boat and Transmitter Unit are turned off before attempting to pick up Boat.
6. Please keep these instructions for future reference.
7. Never attempt any repair as may invalidate your guarantee.